Nima A. Dastmalchi

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EDUCATION

University of California - Los Angeles (UCLA)   Expected June 2023
Bachelor of Science, Computer Science
- GPA: 4.0 / 4.0
- Relevant Coursework: Data Structures, Algorithms and Complexity, Operating Systems, Machine Learning, Computer Networking, Theory of Computation, Software Construction, Probability and Stats
- Entrepreneurship Chair at the Computer Science Honor Society (Upsilon Pi Epsilon)

TECHNICAL SKILLS

- Languages: C++, Python, C, JavaScript, Java, Lisp, Haskell, Shell
- Technologies**:** Git, Linux, React Native, React, Node.js, Google Mock, Catch2

EXPERIENCE

Amazon   June 2022 – September 2022
Software Development Engineer Intern
- Worked on development of UI frameworks critical for application development on Amazon devices
- Designed, developed, and tested a multithreading module to improve performance of device apps (C++)
- Debugged and resolved multithreading issues such as deadlock and race conditions (Catch2, Google Mock)

Caltrans   July 2019 – April 2020
Information Technology Intern
- Imaged and encrypted computers in accordance with Caltrans' policies and procedures (SCCM)
- Resolved hardware and software issues; documented the problem-solving process for future use

PUBLICATIONS

Solar Power Simulation Research   April 2020 – September 2020
Developer and Researcher (UC Berkeley)
- Developed C++ ray-tracing algorithms to simulate Concentrated Solar Power (CSP) systems, which utilize mirrors to concentrate sunlight onto a central receiver that converts heat to electricity
- Utilized physics and differential equations to calculate the power and temperature output of CSP systems
- Presented a poster at HTCC conference to inform about computer science applications in solar power
- Published a research paper in the 2020 edition of *Think You?!* academic journal
https://thinkyou.bayhonors.org/images/2020Symposium/NimaDastmalchi_SolarPowerCapture.pdf

PROJECTS

Scramboard   January 2022 – March 2022
Full-stack Developer
- Developed a client-server web app to allow users to collectively edit a canvas and create pixel art
- Utilized React to design an interactive pixel board and multiple dynamic pages (log-in, user stats)
- Implemented APIs using Node.js to access pixel and user information stored in Firebase in the backend

Autonomous Drone Development   May 2021 – January 2022
- Collaborated with a team to develop an autonomous drone that assists firefighters in Orange County, CA
- Developed an Android app in Java that connects to a DJI drone and enables autonomous flight
- Employed computer vision via the OpenCV library to detect wildfires using the drone's onboard camera

Chat Moderation Bot   December 2020 – January 2021
- Developed an auto-moderation Discord bot running on the computer science club's Discord server
- Utilized a machine learning model to label messages according to attributes (toxicity, helpfulness, etc.)
- Detected abusive comments in public conversations via machine learning with 95% accuracy